

IN THE CLAIMS:

Please AMEND claims 1, 12, and 15-19 as follows.

1. (Currently Amended) A method, comprising:

establishing, by a controller, a radio channel candidate;

processing, by the controller, the radio channel candidate with potentially interfering signals and calculating a carrier to interference ratio for a selected carrier frequency of the radio channel candidate and the potentially interfering signals;

calculating, by the controller, at least one dominant interference ratio being the ratio of a signal level of a strongest potentially interfering signal with respect to a sum of signal levels of other potentially interfering signals; and

using, by the controller, a criteria based on the dominant interference ratio in a channel selection process for selecting a channel for the connection to be established.

2. (Previously Presented) The method according to claim 14, wherein the radio channel candidate and potentially interfering signals are processed using an interference cancellation technique.

3. (Previously Presented) The method according to claim 2, wherein the dominant interference ratio is used to establish an indication as to an interference cancellation gain

provided by the interference cancellation technique, the interference cancellation gain being used to establish a criteria for channel selection.

4. (Previously Presented) The method according to claim 3, wherein the interference cancellation gain is used to modify an estimate of the carrier to interference ratio before using the carrier to interference ratio as a basis for criteria in the channel selection process.

5. (Previously Presented) The method according to claim 1, wherein one of the criteria used in the channel selection process is a maximum value of a minimum difference between the calculated carrier to interference ratio and a target carrier to interference ratio.

6. (Previously Presented) The method according to claim 1, wherein one of the criteria used in the selection process is an average dominant interference ratio taken over a set of n connections which could be interfered with by the connection to be established.

7. (Previously Presented) The method according to claim 3, wherein the interference cancellation gain provided by the interference cancellation technique is established from the dominant interference ratio using a predefined function.

8. (Previously Presented) An apparatus, comprising:
 - an establisher configured to establish a radio channel candidate;
 - a first calculator configured to process the radio channel candidate with potentially interfering signals and to calculate a carrier to interference ratio based on a selected carrier frequency of the radio channel candidate and potentially interfering signals; and
 - a second calculator configured to calculate a dominant interference ratio being a ratio of a signal level of a strongest potentially interfering signal with respect to a sum of the signal levels of other potentially interfering signals; and
 - a selector configured to implement a selection process for selecting a channel for a connection to be established using criteria based on the dominant interference ratio.
9. (Previously Presented) The apparatus according to claim 15, further comprising:
 - an interference canceller configured to apply an interference cancellation technique to the radio channel candidate and potentially interfering signals.
10. (Previously Presented) The apparatus according to claim 9, further comprising:
 - an interference cancellation gain indicator configured to use the dominant interference ratio to establish an indication as to a gain provided by the interference cancellation technique, the gain being used to establish a criteria for channel selection.

11. (Previously Presented) The apparatus according to claim 8, wherein the apparatus is configured to operate as part of a base station controller.

12. (Currently Amended) A system, comprising:

a plurality of stations, at least some of which comprise

an establisher configured to establish a radio channel candidate,

a first calculator configured to process the radio channel candidate with potentially interfering signals and to calculate a carrier to interference ratio based on a selected carrier frequency of the radio channel candidate and potentially interfering signals[[;]],

a second calculator configured to calculate a dominant interference ratio being a ratio of a signal level of a strongest potentially interfering signal with respect to a sum of the signal levels of other potentially interfering signals[[;]], and

a selector configured to implement a selection process for selecting a channel for a connection to be established using criteria based on the dominant interference ratio.

13. (Previously Presented) The system according to claim 12, wherein the system comprises a cellular communication network.

14. (Previously Presented) The method according to claim 1, wherein said using criteria based on the dominant interference ratio additionally uses the carrier to interference ratio.

15. (Currently Amended) The apparatus according to claim 8, wherein said implementor usesis configured to use criteria basedon the carrier to interference ratio.

16. (Currently Amended) An apparatus, comprising:

establishing means for establishing a radio channel candidate;

processing means for processing the radio channel candidate with potentially interfering signals and calculating a carrier to interference ratio based on a selected carrier frequency of the radio channel candidate and potentially interfering signals;

calculating means for calculating a dominant interference ratio being a ratio of a signal level of a strongest potentially interfering signal with respect to a sum of the signal levels of other potentially interfering signals; and

implementing means for implementing a selection process for selecting a channel for a connection to be established using criteria based on the dominant interference ratio.

17. (Currently Amended) The apparatus according to claim 16 wherein said implementing means for implementing uses criteria basedon the carrier to interference ratio.

18. (Currently Amended) The apparatus according to claim 17, further comprising:
applying means for applying an interference cancellation technique to the radio channel candidate and potentially interfering signals.
19. (Currently Amended) The apparatus according to claim 18, further comprising:
using means for using the dominant interference ratio to establish an indication as to a gain provided by the interference cancellation technique, the gain being configured to be used to establish a criteria for channel selection.
20. (Previously Presented) The apparatus according to claim 16, wherein the apparatus is configured to operate as part of a base station controller.
21. (Previously Presented) A computer program embodied on a computer-readable medium, the computer program configured to control a processor to perform operations comprising:
establishing a radio channel candidate;
processing the radio channel candidate with potentially interfering signals and calculating a carrier to interference ratio for a selected carrier frequency of the radio channel candidate and the potentially interfering signals;

calculating at least one dominant interference ratio being the ratio of a signal level of a strongest potentially interfering signal with respect to a sum of signal levels of other potentially interfering signals; and

using a criteria based on the dominant interference ratio in a channel selection process for selecting a channel for the connection to be established.

22. (Previously Presented) The computer program according to claim 21, wherein said using criteria based on the dominant interference ratio additionally uses the carrier to interference ratio.

23. (Previously Presented) The computer program according to claim 22, wherein the radio channel candidate and potentially interfering signals are processed using an interference cancellation technique.

24. (Previously Presented) The computer program according to claim 23, wherein the dominant interference ratio is used to establish an indication as to an interference cancellation gain provided by the interference cancellation technique, the interference cancellation gain being used to establish a criteria for channel selection.

25. (Previously Presented) The computer program according to claim 24, wherein the interference cancellation gain is used to modify an estimate of the carrier to interference

ratio before using the carrier to interference ratio as a basis for criteria in the channel selection process.

26. (Previously Presented) The computer program according to claim 21, wherein one of the criteria used in the channel selection process is a maximum value of a minimum difference between the calculated carrier to interference ratio and a target carrier to interference ratio.

27. (Previously Presented) The computer program according to claim 21, wherein one of the criteria used in the selection process is an average dominant interference ratio taken over a set of n connections which could be interfered with by the connection to be established.

28. (Previously Presented) The computer program according to claim 24, wherein the interference cancellation gain provided by the interference cancellation technique is established from the dominant interference ratio using a predefined function.